

# An Overview of the Model II Documentation Package



This binder contains the information you need to use the Model II Computer System. It is intended as a practical reference guide to the System. It is NOT a tutorial. Some familiarity with Computers will be very helpful in reading this material and using the Computer.

**SCRYPTION**  
*museum voor schriftelijke communicatie*

The binder comes with three manuals; other manuals can be added as you expand your System.

## Operation Manual

Explains the connection and operation of the System, including power-up, handling diskettes, the keyboard, maintenance, etc. If you are going to use Radio Shack Applications Software, this Manual will give you all the information you need to get going. It does NOT describe Model II software (Operating System, BASIC, etc.).

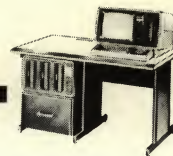
## Model II TRSDOS Reference Manual

Describes the Operating System: command format, file specification, operator commands, utilities, system routines available to assembly programmers, memory allocation, keyboard and video display features, etc.

## Model II BASIC Reference Manual

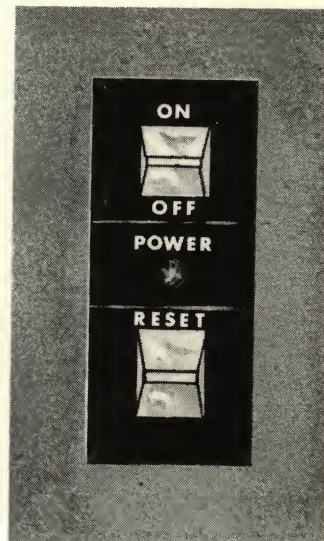
Describes the BASIC programming language used in the Model II. While the manual includes examples of statements and short applications programs, it is not a teaching-book. Radio Shack sells several books which will help you learn to program with BASIC.





## 3 / Operation

1. Be sure all drives in the System are empty, and all components are turned off. If no Disk Expansion System is present, be sure to connect the Disk Terminator plug to the Computer.
2. Turn on the Computer (Display Console). Wait until the message "INSERT DISKETTE" appears on the display. If the message fails to appear within 10 seconds, press RESET. If it still fails to appear, turn the Computer off and check all connections. Wait at least 15 seconds before starting over at step 1.
3. When "INSERT DISKETTE" is displayed, turn on the Disk Expansion System (if connected) and all other peripherals.
4. Insert the System diskette into drive 0 and close the drive door. The Computer will load the operating system and prompt you to enter the date and time.
5. Before turning the Computer off, remove all diskettes from all drives. Then turn off the entire system.
6. After any power-down, wait at least 15 seconds before turning the System on again. Start at step 1.



### Using the RESET Switch

If you should ever lose Keyboard control of the System, or you simply want to re-initialize, press RESET up momentarily and release it. The Computer will repeat the power-up sequence, but the contents of user memory will not be affected.

**Note:** You do not need to remove the diskette during this Reset sequence.





## MODEL II OPERATION

### Notes on Diskettes

Diskettes are precision recording media. Handle them carefully, as described under Section 5, **Care and Maintenance**. Be sure you don't touch the exposed diskette surfaces.

Before inserting the diskette, check the write protect notch. (See illustration.) If you do not want to write to that diskette, it is a good idea to leave it "write-protected". This way, the Operating System will not let you accidentally write to that diskette. To write-protect a diskette, just leave the write-protect notch **UN**covered. (See **Figure 4**.)

If you **do** want to write to the diskette, cover the write protect notch with gummed-foil tape provided with the diskette.

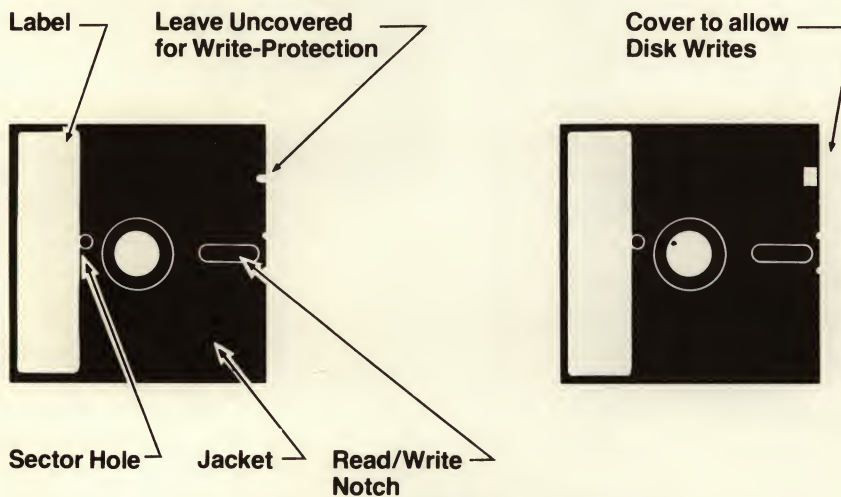


Figure 4. A diskette and a write-protected diskette.

**Note:** Any alteration of the data on the diskette — even the deletion of data or programs, requires that the diskette **not** be write-protected. (Cover the notch with gummed foil tape.)

### Inserting a Diskette

1. If the drive door is closed, open it by pressing the release bar until the door springs open. (Refer to **Figure 5**.)
2. Remove the Operating System diskette from its storage envelope. Grasp the label side with the label facing away from the Display and insert it into the drive slot (see photo).
3. Gently push the diskette all the way into the slot.
4. Close the door by moving it toward the left until it clicks into place. Some pressure may be required.

# Model II Owner's Manual, Second Printing - Errata

Please make these corrections in your owner's manual. The number at the start of each correction identifies the page within the specified manual (TRSDOS or BASIC). The essential wording of each correction or addition is underlined.

## TRSDOS Section

- 0/2 Step 1. Multi-drive customers use a command like this:

FORMAT :1 {ID=TRSDOS, PW=PASSWORD, FULL}

- 0/3 Step 3-D. TRSDOS 1.2 contains . . .

- 2/4 There must be at least one space between the command and any option list or comment. For example:  
DIR1  
is an error. Insert a space between R and 1.

- 2/9 The EXEC protection level should be used to protect machine-language programs ("P" attribute in the DIR listing). Do not use this protection level for BASIC program files, or the BASIC interpreter will not be able to load and run them. BASIC programs must have a protection level of READ or higher.

- 2/30 ?L S=nnnn E=xxxx T=nnnn+1  
will copy the value in nnnn into every location from nnnn+1 to xxxx+1.

- 2/40 The DUMP options (START=address-1, etcetera) can be enclosed in optional braces {} ; file is not enclosed in braces.

- 2/41 For a complete list of TRSDOS error codes, see pages 4/11-4/12 of this manual.

- 2/45 In the sample FREE map, the directory takes all of track 44.

- 3/42 P (Toggle Printer Option)  
This command works only in conjunction with the D (display RAM) command. It does not work in the interactive terminal mode. When you use the D command with the P option on, the RAM buffer text will be listed to the printer as well as to the display. (Delete the last three paragraphs on page 3/42.)

- 4/17 Function codes 96-99 are available for user definition, unless the serial interface has been initialized (see RS232C, page 4/76). Function codes 100-127 are always available for user definition.

- 4/18 The Z-80 register contents are unchanged upon entry to the <BREAK> program.

- 4/38 HEX FUNCTION  
FC Col = Col - 1. When column = 0, cursor wraps to column 79 on preceding row.  
FD Col = Col + 1. When column = 79, cursor wraps to column 0 on the next row.

- 4/59 HL = Reserved for use in later versions of TRSDOS

- 4/65 Exit Conditions. HL' = Address of first nonmatching character in second string. DE' = Address of first nonmatching character in first string.

- 4/74 The string scan terminates on a X'OD' (carriage return) in the text area.

## BASIC Section

- 2/17 The conversion from double- to single-precision takes place at the binary level; therefore there is no simple formula for specifying the exact rounding procedure in terms of decimal numbers. The formula given in the first paragraph is only a rule of thumb; for some borderline values, it may not be correct.

- 2/27 (Table, first row:) Addition, subtraction and multiplication of integers (I op I) can return integer or single-precision results, depending on the magnitude of the result.

- 3/14 RENUM also changes line references appearing in RESUME statements.

- 3/27 (Change last paragraph:) The function can be defined with no arguments at all, if none are required. For example:  
DEF FNR = RND (90) + 9  
defines a function to return a random value between 10 and 99.

- 3/32 In a DEFUSR statement, address may be any numeric expression or constant (it can be a decimal or hexadecimal constant, numeric expression, etc) in the range [-32768, 32767].



(BASIC Section, continued)

- 3/70 A % sign is automatically prefixed to a number if the number contains more characters than were specified in the numeric field. The entire number will be displayed after the % sign.
- 3/99 The third example does not print the trigonometric difference (a special math formula) of the cosines, but the simple arithmetic difference of the cosines. The fourth example stores the entire quantity to the right of the equals sign, not just the cosine.
- 3/102 For negative, non-whole number X,  
 $\text{FIX}(X) = \text{INT}(X) + 1$ . For all other X,  $\text{FIX}(X) = \text{INT}(X)$ .
- 3/139 LOF (number)  
number specifies a direct access buffer, 1, 2, . . . , 15
- 5/7 The last line of computer type should look like this:  
100 FOR I=1 TO 10 STEP .25:\PRINT I,I^2,I^3:\ ■
- C/1 Delete WIDTH from the reserved word list.

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